| UNITED STATES DISTRICT COURT EASTERN DISTRICT OF TENNESSEE | Y | |
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| ULTIMA SERVICES CORPORATION, | : | |
| Plaintiff, | : | |
| -against- | : | No. 2:20-cv-00041- DCLC-CRW |
| U.S. DEPARTMENT OF AGRICULTURE, U.S. SMALL BUSINESS ADMINISTRATION, | : | |
| SECRETARY OF AGRICULTURE, and ADMINISTRATOR OF THE SMALL BUSINESS ADMINISTRATION, | R : | |
| Defendants. | : | |

STATEMENT OF JONATHAN GURYAN

Jonathan Guryan hereby states:

- 1. I am a labor economist. I received my Ph.D in Economics from the Massachusetts Institute of Technology in 2000, and I currently work as a Professor in the School of Education and Social Policy at Northwestern University. I was retained by plaintiff in this lawsuit to offer my expert opinion concerning the reports of defendants' experts Dr. Jon Wainwright and Mr. Daniel Chow.
- 2. Accompanying this statement as an Exhibit is my report in this matter. The report accurately states my qualifications, work on this matter, and opinions with respect to the Wainwright and Chow reports. In this statement, I wish to highlight just a few of those.
- 3. First, as I mentioned in my report (see pages 20-21, 22), the second and third parts of Dr. Wainwright's report use data from census sources that do not distinguish between

businesses that receive significant revenue from contracting with the federal government or other private and public entities, and those that that do not. For this reason, I do not believe that any valid conclusion can be drawn about discrimination in any contracting-related market from the analyses Dr. Wainwright does with these sources. The disparities that Dr. Wainwright's study claims to measure from these sources could just as easily be caused by disparities related to McDonald's franchisees, hardware store owners, mom & pop groceries, and any of a whole host of businesses that do not enter into large contracts and receive a significant portion of their revenue from the public.

4. Second, when using a regression analysis to test whether discrimination is a cause of a disparity between two groups, it is crucial to control for everything besides discrimination that might cause the average outcomes of the two groups to be different. To be able to draw a valid conclusion from a regression analysis about whether a disparity is caused by discrimination, it is necessary to include control variables that hold constant all non-discriminatory factors that might influence the outcome and that might vary between the two groups. During my deposition, and elsewhere, defendants suggest that control variables can be omitted if the researcher does not have evidence that the variable differs between the two groups (e.g. by race or sex). In my opinion, this is an incorrect view of how social science research should be conducted. In a regression-based test of discrimination, the choice by the researcher not to include such a variable as a control is equivalent to the researcher making the assumption that the variable does not differ on average between the two groups (e.g. by race or sex). If that assumption is incorrect, then the regression results will be biased. The purpose of including a regression control variable in a study measuring racial differences is to determine whether that

variable might explain what might otherwise appears to be a racial difference. To assume that control variables do not differ on the basis of race, and to exclude those variables based on that assumption, is to assume the answer to the question that the researcher is trying to answer.

- 5. To adduce an example, Mr. Chow does not include bidding information in his analysis even though common sense would tell us that a firm that bids more often is more likely to obtain contracts than one that does so only rarely or does not bid at all. Because Mr. Chow does not include bidding behavior as a control, his regression analysis relies on the assumption that bidding behavior does not differ among the groups of businesses he compares. Defendants make the argument that because I raised the criticism that Mr. Chow failed to control for bidding behavior, it is my responsibility to show evidence that bidding behavior varies by race. This has the logic of regression analysis backwards. It is Mr. Chow who must make an assumption that the variables he excludes from his analysis either do not affect contracting outcomes or do not vary by race. Without that assumption, Mr. Chow cannot rule out the possibility that the disparity he measures is the result of differences in bidding behavior, and it is therefore inappropriate for Mr. Chow to draw the conclusion that the disparity is the result of discrimination. Mr. Chow includes other variables, like security clearance, even though he provides no outside evidence that security clearances differ by race. In my opinion, he offers no good reason why he chose at the outset that security clearance is included in his analysis and bidding information is not.
- 6. Defendants argue that Mr. Chow did not control for certain factors, including bidding behavior, because they were not included in the dataset he was provided. Regardless of whether bidding data was hard to obtain, Mr. Chow's analysis cannot rule out the possibility that differences in bidding behavior explain the differences in contracting outcomes that he measures.

It is therefore inappropriate for Mr. Chow to draw the conclusion, based on his analysis, that discrimination is the cause of those disparities he measures, as opposed to differences in bidding behavior. In the absence of information regarding important explanatory variables, the appropriate conclusion for a researcher is that any disparities found in the study could be caused by the variables that were omitted, whether that omission is as a result of the lack of data or the choice of the researcher. Indeed, the fact that there are so many potentially important variables that are not included in many standard datasets, in part because they are difficult to measure, is why the National Academy of Sciences generally disfavors regression analysis of the kind performed by Dr. Wainwright and Mr. Chow in trying to test for discrimination in markets.

- 7. I relied on the National Academy of Sciences 2004 study that I quote on pages 10-11 of my report, as well as the other respected sources listed on those pages and elsewhere in my report, in arriving at my conclusions. The National Academy of Sciences was established by an Act of Congress, signed by President Abraham Lincoln in 1863, and is charged with providing independent, objective advice to the nation on matters related to science and technology.
- 8. Defendants criticize my opinions because they state that I did not understand what Mr. Chow did. It is true that I did misunderstand a part of Mr. Chow's report, but that is only because his report itself did not accurately state what he did. Specifically, in the three paragraphs under "Data Availability" in his report, Mr. Chow describes a process whereby he took the original raw databases and created two files, one of which contained 5.1 million observations and 55 variables from FPDS (Federal Procurement Data System) datasets. In the next paragraph, he speaks about SAM (System for Award Management) data, the last sentence of

which is his description of merging and removing redundant observations that resulted in a file

of 5.6 million observations and 64 variables. I naturally assumed that the former 55 variable

file was a combination of the two FPDS datasets he had previously described, and that the latter

64 variable file was the combination of FPDS and SAM data he described in the paragraph that

ends with a description of merging datasets. To be certain, plaintiff asked Mr. Chow about this

at his deposition, and Mr. Chow confirmed that this was the case. So, to the extent I

misunderstood, it was because Mr. Chow misinformed us of the nature of the datasets he used in

his study.

9. Nonetheless, I do not think that this misunderstanding mitigates the flaws in Mr.

Chow's analysis that I wrote about in my report. It is still my opinion that his failure to

consider bidding behavior, for example, precludes him from arriving at any conclusions

concerning discrimination based on the analysis he conducted. Moreover, Mr. Chow concedes

that his data would not allow him to consider whether there was any significant disparity for any

given racial or national origin group. Doc. 68-2, pg. 3 (PageID # 2334), ¶9.

I state under penalty of perjury that the foregoing is true and correct.

Executed on July 12, 2022.

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Dr. Jonathan Guryan